

REMARKS

Applicants, their principal representatives in Germany, and the undersigned have carefully reviewed the first Office Action on the merits in the subject U.S. patent application, together with the prior art cited and relied on by the Examiner in the rejections of the claims. In response, the substitute specification and claims of the application, as filed, and as amended by the Preliminary Amendment, have been amended. It is believed that the claims now pending in the subject U. S. patent application are patentable over the prior art cited and relied on. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

The subject application discloses, and claims a longitudinal fold former that is usable to impart a longitudinal fold to a continuous web of material. As may be seen, for example, in Fig. 1, the longitudinal former, generally at 01 has first and second former leg areas 03 that are constituted by a longitudinal web former support body 08. The first and second former leg areas converge toward each other, as seen in Fig. 1. Each of these leg areas has a rigid, air permeable leg area support surface which is adapted to act with the web of material, generally at 06, which is to be longitudinally folded.

A nose section 04 of the longitudinal web former support body is located at the convergence of the first and second converging leg areas, again as may be seen in Fig. 1. That nose section 04 has a rigid, air permeable nose support surface.

A first surface layer of a micro-porous, air permeable material, generally at 09, is placed on each of the first and second leg areas. That first surface layer of each leg area has a plurality of micro-openings that provide for the exit of a fluid under pressure.

The mean diameter of these first micro-openings is less than 500 μm and provides a first fluid permeability per unit of area.

A second surface layer of the micro-porous, air permeable material is on the support surface of the nose section. This second surface layer also is a micro-porous, air permeable material having a plurality of micro-openings with a mean diameter of less than 500 μm and with a second fluid permeability per unit of area. The second fluid permeability is greater than the first fluid permeability.

In the first Office Action on the merits of November 6, 2006, the applicant's election of the claims of Group I was acknowledged. Applicants have now cancelled the claims identified by the Examiner as Group II and III. Applicants again expressly reserve the right to file one or more divisional patent applications directed to these non-elected claims. The Examiner's acknowledgment of the receipt of the priority documents is noted and appreciated.

Claims 42, 45-47, 49, 51, 53, 55, 57, 59, 61, 63, 67, 70, 72, 74, 77, 79, 84, 88 and 90, all of the claims now pending in the subject application, were rejected under 35 USC 103(a) as being unpatentable over the German document No. DE 198 29 095 A1 to Lang. It was asserted in the Office Action that Lang discloses a former of a web-processing machine which includes first and second angularly conveying leg area at 6 and 7 in Fig. 1, and which have surfaces adapted to act with a web to be folded. It was further asserted that there is provided a nose section at a convergence of the leg areas and having a nose section allegedly shown at a lower portion of Fig. 1. The Office Action further asserted that there is a first coating of micro-porous material on the leg areas via a former plate 1 with inner bores 2 and 3 along the edges. The Office Action

further recited a second coating of a micro-porous material on a surface of the nose section, as asserted as being shown at Fig. 1 at 12-15. It was admitted that Lang does not have the first and second coatings of the micro-porous materials with diameters of less than 500 μm . It was also admitted that Lang does not discuss or suggest different fluid permeabilities for the two sections. It was asserted that these claimed features would have been obvious to one of skill in the art.

The printing device shown in the Lang document, DE 198 29 095 is clearly not a web-processing machine. It is clearly a sheet-processing machine. Sheets of material are passed through several printing elements 14 and laquer elements 15 and 16. As seen in Fig. 2, the rotation of the press cylinders 1 is in a counterclockwise direction. This means that the sheets of paper or other material move through the press elements from right to left, as seen in Fig. 1, and are deposited by a transport conveyor system 19, also moving in the direction indicated by the arrow 5 in Fig. 1, in a stack of sheets. For these reasons, it is very clear that Lang, DE 198 29 095 is not directed to, and does not disclose a former of a web-processing machine.

The two elements 6 and 7, which are located above each of the press cylinders 1, as seen in Fig. 1, are identified as guide devices in the English language abstract. It is clear that each of these guide devices, which are seen in side view in Fig. 2, are somewhat arcuate or wing-shaped in cross-section and that they extend in the direction of the axis of rotation of the cylinder 1. Each of these guide elements has a porous surface 10 which overlies the periphery of the cylinder 1. Each guide element 6, 7 has a reduced thickness edge 21 that is located close to the printing gap 22 between the cylinder 1 and the cylinder 2 or 12, as seen in Fig. 2. Each guide element 6, 7 also has

an enlarged thickness area, generally at 9, at a point remote from the printing gap 22.

A surface 10 that extends from the thin edge 21 to the thick edge 9 of each of the guide devices 6 and 7 has a microporous surface. It is not clear how a fluid under pressure is supplied to an interior chamber of each of the guide devices but it is recited that these chambers are connected to some type of pneumatic system.

The two guide devices 6 and 7 of Lang are not first and second angularly converging leg areas that meet at a nose section which is situated at their point of convergence. The two guide devices 6 and 7 of Lang are parallel to each other and do not converge with respect to each other to define a nose section. The surfaces 10 act with a sheet that is being transported from right to left in Fig. 1. They do not act with a web to be folded. The assertion in the Office Action that there is a nose section at the lower portion of Fig. 1, is vague and does not direct one to any specific structure of the Lang device.

The assertion in the Office Action, at the bottom of page 2 thereof, where it is recited that there is "... a first coating of micro-porous material on said surface of said leg areas (see former plate 1 with inner bores 2 and 3 along the edges..." is unclear. While each guide device 6 and 7 appears to have a micro-porous surface at 10, the reference numeral 1 is clearly a cylinder, as are the elements denoted by reference numerals 2 and 3. Element 2 is identified as a forme cylinder and element 3 is identified as a roller of some type. The discussion in the Office Action, at the bottom of page 2 thereof is not clear.

Similarly, the assertion at the top of page 4 of the Office Action, regarding first and second coatings with first and second permeabilities per unit of area, does not

appear to be supported by any teaching of the Lang reference. The recitation in the Office Action of elements 12-15 of Fig. 1 as showing such a structure on a nose surface is not accurate. Element 12 is a cylinder, such as a transfer cylinder. Element 13 is a plate cylinder. Element 14 is identified as a press element and element 15 is one of the so-called laquer cylinders or rollers. It is not understood how these diverse elements could define a nose section or how they could have fluid permeabilities.

Lang clearly does not teach, or suggest any range of sizes for the first and second layers of the micro-porous material, as recited in currently amended claim 42. The reliance of the Examiner on the overused "obvious to one of skill in the art" argument cannot compensate for what is essentially a hindsight rejection. The substitute specification of the subject application, at paragraph 0035 thereof, specifically discusses the provision of micro-porous, air permeable materials of different properties for the leg areas and for the non area. These sizes and permeabilities are clearly not features that would be obvious to one of skill in the art. In passing, it is noted that several minor typing and phrasing errors in paragraph 0035 have been corrected. These corrections do not add any new matter and do not affect the disclosure of paragraph 0035.

Claim 42, as filed, and even more clearly, as amended, is not unpatentable over Lang. The Lang device is a sheet guiding device whereas claim 42 is directed to a longitudinal web former. The two separate guide devices 6 and 7 of Lang extend transversely to a direction of sheet travel through the Lang device. The two separate guide devices 6 and 7 of Lang do not have first and second angularly converging leg areas that define a nose section at their convergence. The lower surface 10 of each of

the two guide surfaces 10 of the Lang device have micro-porous openings. However, Lang has no teaching, or suggestion of first and second fluid permeabilities with the two permeabilities being located in different areas and being different from each other. The attempt to attribute various features of claim 42, as filed, to Lang are creative but inaccurate, at best. Claim 42, as filed, and even more clearly as amended, is not obvious to one of skill in the art over the Lang reference.

All of the additional claims now pending in the subject application depend, either directly or indirectly from believed allowable, currently amended claim 42. With respect to claims 46 and 47, those claims recite that the porous material is an open-pored sinter material or sinter metal. The rejection of these claims refers to Figs. 1 and 2 of Lang "...via air pipes...". Such a rejection is not understood. The porous material referred to in the claims is the layer on the leg areas and nose section. Its nearest equivalent in Lang would be the material 10 on the guide members 6. The assertion that "air pipes" are inherently metal pipes is of no relevance.

Various other ones of the references in the Office Action to what are presumed to be Lang 198 29 095 are also not understood. Repeated references are made to a support body 1. In Lang '095 the body 1 is a cylinder.

With respect to claims 70, 72 and 74 it is asserted that Lang shows a feed line adapted to feed fluid to the former, as seen at 8-11. In Lang, element 8 appears to be some type of shaft about which each guide device 6,7 is supported for pivotal movement. Element 9 is the broad end of the guide device 6. Element 10 is the micro-porous coating. Element 11 appears to be a non-porous surface of the guide device 6 that is opposite the porous surface 10. The reference numerals cited by the Examiner,

and their asserted depictions seem at odds with the cited Lang document DE 198 29 095. No other Lang document was cited to the Examiner by the undersigned. No other Lang document was cited by the Examiner. Clarification of the various rejections raised by the Examiner would be appreciated.

SUMMARY

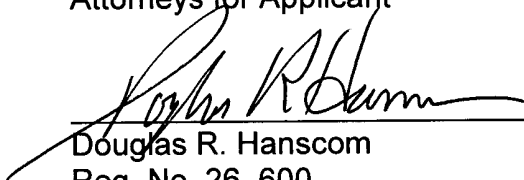
The claims selected for prosecution in the subject application, have been amended, where appropriate, to further define the subject invention over the prior art cited and relied on by the Examiner. In various instances, the Examiner's discussion of the Lang reference seems to conflict with the depictions and descriptions of the reference. Clarification of these rejections is believed to be needed.

It is believed that the claims now pending in the subject application are patentable over the prior art cited and relied on. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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